



Infectious Disease Epidemiology Report

Voluntary Reporting of Influenza Testing - Maine, 2013-2014



Synopsis

Influenza is a viral illness that typically occurs during the winter months. Illness is characterized by the abrupt onset of constitutional and respiratory signs and symptoms, such as fever, muscle aches, headache, severe malaise, non-productive cough, sore throat, and runny nose. Influenza is spread from person to person primarily by coughing and sneezing. The 2013-2014 influenza season ran from September 29, 2013 to September 27, 2014. Maine CDC released weekly reports from September 30, 2013 to May 17, 2014 which is when the majority of activity occurred.

Methods

Maine does not require seasonal influenza infection to be reported (novel influenza is considered a reportable disease). However, many outpatient offices, laboratories, and hospitals report positive tests. These tests have varying sensitivity and specificity depending on the prevalence of influenza in the area and which test is used. Serology results (titers) are not included in this report because it is impossible to differentiate between disease and vaccine response without clinical information. Every positive test is entered into Maine's surveillance system to identify trends and characterize influenza burden.

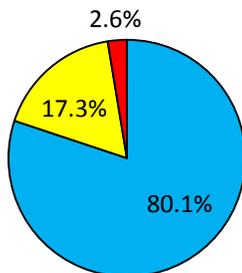
Results

During the 2013-14 season, a total of 759 positive influenza tests were reported to Maine CDC.

Influenza Type

Many rapid tests are able to distinguish between influenza types A and B. Influenza was classified as type A, type B, or not typed. For the 2013-14 season, 608 (80.1%) patients tested positive for type A, 131 (17.3%) patients tested positive for type B, and 20 (2.6%) patient tests did not differentiate between types.

Positive Influenza Tests by Type – Maine, 2013-14

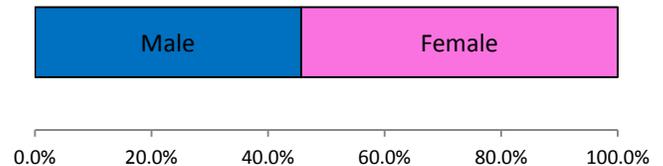


■ Influenza A ■ Influenza B ■ Influenza (unsubtyped)

Gender

For the 2013-14 influenza season, gender data were available for all but 2 patients; 411 (54.3%) of the patients with positive tests were female, and 346 (45.7%) of the patients with positive tests were male.

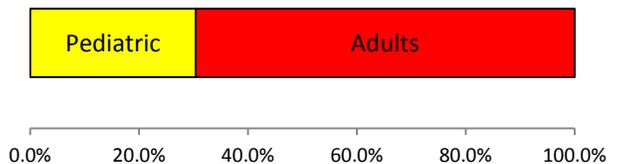
Positive Influenza Tests by Gender – Maine, 2013-14



Pediatric Burden of Disease

All positive influenza reports included the patient's date of birth which was used to calculate age. Patients were categorized as pediatric (under 18 years) or adult (18 years or older). For the 2013-14 influenza season, 231 (30.4%) of the patients were pediatric, and 528 (69.6%) patients were adult.

Positive Influenza Tests by Age Group – Maine, 2013-14

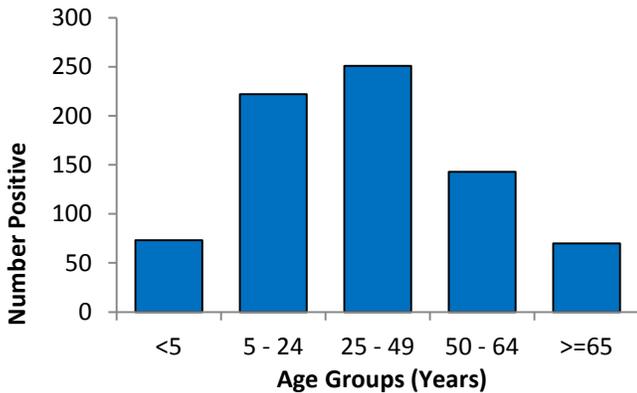


Age Distribution

Using the age calculated from the date of birth, the data were categorized into age groups. The youngest person reported with influenza during the 2013-14 season was 2 months old and the oldest was 96 years. The mean age among reported patients positive for influenza was 34 years.

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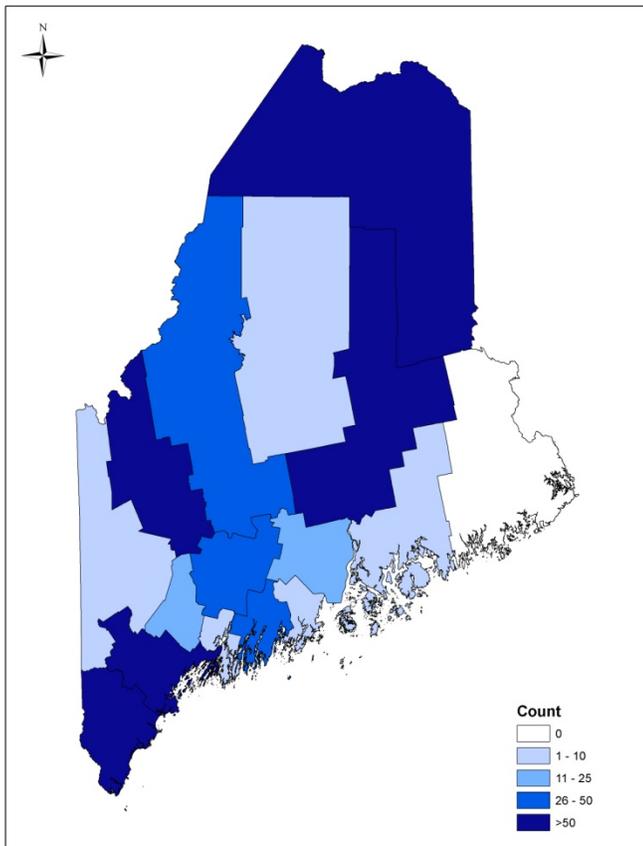
Positive Influenza Tests by Age – Maine, 2013-14



Geographic Distribution

Most of the influenza reports included the city of patient’s residence. For those that did not have a city listed, the city from the reporting source was used. Using this method, city and county data were available for all patients. Influenza was reported in 15 counties.

Positive Influenza Tests by County – Maine, 2013-14

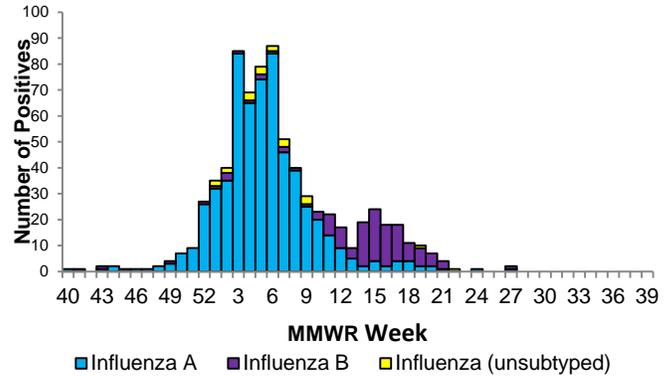


Time Frame

Positive rapid tests were first reported to Maine CDC in October 2013. The positive tests reported to Maine CDC peaked in the first week of February (87 tests reported).

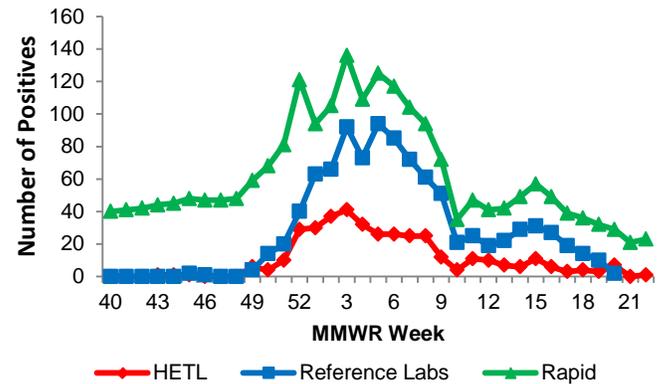
Two positive influenza A, and one positive influenza B were reported in June, No positive tests were reported July – September.

Positive Influenza Tests by Type– Maine, 2013-14



The findings of voluntary test surveillance matched well to the trends identified through other laboratory surveillance methods (reference labs, HETL)

Three Reporting Methods for Influenza – Maine, 2013-14



Discussion

In this sample of positive lab tests from the 2013-14 influenza season in Maine, influenza A was reported more than influenza B. Overall, influenza was reported in more adults than pediatric patients. The most commonly reported age group was 25-49, which is older than previous years. Cumberland and York counties reported the most cases of influenza with 153 and 147 respectively. Influenza laboratory activity during the 2013-14 season peaked in late January – early February.

Although rapid test results have limitations, they demonstrate the burden of disease by age group, gender, geographical location, and time of year.